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MAY 15 2006

FACSIMILE TRANSMITTAL SHEET

Including this transmittal sheet, document consists of 74 pages.Date: May 15, 2006

To: Commissioner for Patents

From: Kermit Robinson, Esq.

Examiner: Hung V. Ngo

Group Art: 2831

Company: U.S. PTO

Facsimile Number: 571-273-8300

Telephone Number:

MESSAGE

RE: U.S. Patent Application of Michael Doogue, et al.
Entitled: CURRENT SENSOR
Filed on: August 26, 2003
U.S. Appl. No.: 10/649,450
Our Ref. No.: ALLEG-039PUS

PLEASE CONFIRM RECEIPT OF THIS FACSIMILE TRANSMISSION.

THANK YOU.

STATEMENT OF CONFIDENTIALITY

The documents included with this facsimile transmittal sheet contain information which is confidential and/or privileged. The information is intended to be for the use of the addressee named on this transmittal sheet. If you are not the addressee, note that any disclosure, photocopying, distribution or use of the contents of this faxed information is prohibited. If you have received this facsimile in error, please notify us by telephone (collect) immediately so that we can arrange for the retrieval of the original documents at no cost to you.

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PTO/SB/21 (09-04)

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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| | | | |
|---|----------------------|------------------------|--------------|
| TRANSMITTAL FORM (to be used for all correspondence after initial filing) | Application Number | 10/649,450 | |
| | Filing Date | August 26, 2003 | |
| | First Named Inventor | Michael Doogue | |
| | Art Unit | 2831 | |
| | Examiner Name | Hung V. Ngo | |
| Total Number of Pages in This Submission | 73 | Attorney Docket Number | ALLEG-039PUS |

| ENCLOSURES (Check all that apply) | | |
|--|--|--|
| <input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD | <input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): PTO/SB-08A with 4 cited references (1 attached) |
| Remarks In the event a petition for extension of time is required by this paper and not otherwise provided, such petition is hereby made and authorization is provided herewith to charge deposit account No. 50-0845 for the cost of such extension. | | |

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

| | | | |
|--------------|--------------------------------------|----------|---------------------------|
| Firm Name | Daly, Crowley, Mofford & Durkee, LLP | | USPTO Customer No. 022494 |
| Signature | | | |
| Printed name | Kermit Robinson | | |
| Date | May 15, 2006 | Reg. No. | 48,734 |

CERTIFICATE OF TRANSMISSION/MAILING

| | | |
|---|-----------------|--------------|
| I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below: | | |
| Signature | | |
| Typed or printed name | Kermit Robinson | Date |
| | | May 15, 2006 |

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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MAY 15 2006

PTO/SB/17 (12-04)

Approved for use through 07/31/2008. OMB 0651-0032

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL**
For FY 2005☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)

180

Complete if Known

| | |
|----------------------|-----------------|
| Application Number | 10/649,450 |
| Filing Date | August 26, 2003 |
| First Named Inventor | Michael Doogue |
| Examiner Name | Hung V. Ngo |
| Art Unit | 2831 |
| Attorney Docket No. | ALLEG-039PUS |

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 010854 Deposit Account Name: Allegro Microsystems, Inc.

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

| Application Type | FILING FEES | | SEARCH FEES | | EXAMINATION FEES | | Fees Paid (\$) |
|------------------|-------------|-----------------------|-------------|-----------------------|------------------|-----------------------|----------------|
| | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | |
| Provisional | 200 | 100 | 0 | 0 | 0 | 0 | |

2. EXCESS CLAIM FEES

| Fee Description | Fee (\$) | Small Entity Fee (\$) |
|---|----------|-----------------------|
| Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent | 50 | 25 |
| Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent | 200 | 100 |
| Multiple dependent claims | 360 | 180 |

| Total Claims | Extra Claims | Fee (\$) | Fee Paid (\$) |
|--------------|--------------|----------|---------------|
| - 20 or HP = | 0 | | 0 |

HP = highest number of total claims paid for, if greater than 20

| Indep. Claims | Extra Claims | Fee (\$) | Fee Paid (\$) |
|---------------|--------------|----------|---------------|
| - 3 or HP = | 0 | | 0 |

HP = highest number of independent claims paid for, if greater than 3

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee (\$) | Fee Paid (\$) |
|--------------|--------------|--|----------|---------------|
| - 100 = | 0 | 0 | 0 | 0 |

(round up to a whole number) x

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other: Information Disclosure Statement

SUBMITTED BY

Signature

Name (Print/Type)

Judith C. Crowley

Registration No.
(Attorney/Agent)

35,091

Telephone 781.401.9988 ext. 12

Date 15 May 2006

This collection of information is required by 37 CFR 1.138. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22312-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

MAY 15 2006**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No. : 10/649,450
Applicant : Michael Doogue, et al.
Filed : August 26, 2003
T.C./A.U. : 2831
Examiner : Hung V. Ngo

Confirmation No.: 5775

Docket No. : ALLEG-039PUS
Customer No. : 022494

Certificate of Mailing (37 C.F.R. 1.8(a))

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May 15, 2006
Date of Signature
and Mail Deposit

By: 

Kermit Robinson
Reg. No. 48,734

05/16/2006 STEUMEL1 00000033 010854 10649450

01 FC:1806 180.00 DA

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

It is desired to cite for the record in this application the enclosed documents listed on the attached copy of PTO form PTO/SB/08A. The paragraph(s) marked below are applicable to this Information Disclosure Statement.

[] (1) The enclosed Information Disclosure Statement is being filed: within three months of the filing date; or within three months of the entry of the national stage of the above-identified application; or before the mailing of a first Office Action on the merits; or before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. §1.114. Accordingly, Applicant(s) believes that no fee or statement is required.

Page 1 of 5

Appl. No. 10/649,450

Docket No. ALLEG-039PUS

☒ (2) Pursuant to 37 C.F.R. § 1.97(c), the enclosed Information Disclosure Statement is being filed before the mailing date of a final action or a notice of allowance and is accompanied by the fee set forth in 37 C.F.R. § 1.17(p).

SUBMISSION UNDER 37 C.F.R. § 1.97(c)

INCLUDING A STATEMENT UNDER 37 C.F.R. § 1.97(e)(1)

☐ (3) Pursuant to 37 C.F.R. § 1.97(c), the enclosed Information Disclosure Statement is being filed before the mailing date of a final action or a notice of allowance and is accompanied by a statement under 37 C.F.R. § 1.97(e)(1). The undersigned hereby states that each item of information contained in the attached Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application mailed not more than three months prior to the filing of the accompanying Information Disclosure Statement.

SUBMISSION UNDER 37 C.F.R. § 1.97(c)

INCLUDING A STATEMENT UNDER 37 C.F.R. § 1.97(e)(2)

☐ (4) Pursuant to 37 C.F.R. § 1.97(c), the enclosed Information Disclosure Statement is being filed before the mailing date of a final action or a notice of allowance and is accompanied by a statement under 37 C.F.R. § 1.97(e)(2). The undersigned hereby states that no item of information contained in the accompanying Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the accompanying Information Disclosure Statement was known to any individual having a duty of disclosure as set forth in 37 C.F.R. § 1.56 (c) more than three months prior to the filing of the accompanying Information Disclosure Statement.

Appl. No. 10/649,450

Docket No. ALLEG-039PUS

SUBMISSION UNDER 37 C.F.R. § 1.97(c)INCLUDING STATEMENTS UNDER 37 C.F.R. §§ 1.704(d) AND 1.97(e)(1)

[] (5) Pursuant to 37 C.F.R. § 1.97(c), the enclosed Information Disclosure Statement is being filed before the mailing date of a final action or a notice of allowance and is accompanied by statements under 37 C.F.R. §§ 1.704(d) and 1.97(e)(1). The undersigned hereby states that each item of information contained in the attached Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application mailed not more than three months prior to the filing of the accompanying Information Disclosure Statement and was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of the accompanying Information Disclosure Statement.

SUBMISSION UNDER 37 C.F.R. § 1.97(d)INCLUDING A STATEMENT UNDER 37 C.F.R. §1.97(e)(1)

[] (6) Pursuant to 37 C.F.R. § 1.97(d), the enclosed Information Disclosure Statement is being filed on or before payment of the issue fee and is accompanied by a statement under 37 C.F.R. § 1.97(e)(1) and the fee required under 37 C.F.R. § 1.17(p). The undersigned hereby states that each item of information contained in the accompanying Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Information Disclosure Statement.

SUBMISSION UNDER 37 C.F.R. § 1.97(d)INCLUDING A STATEMENT UNDER 37 C.F.R. §1.97(e)(2)

[] (7) Pursuant to 37 C.F.R. § 1.97(d), the enclosed Information Disclosure Statement is being filed on or before payment of the issue fee and is accompanied by a statement under 37 C.F.R. § 1.97(e)(2) and the fee required under 37 C.F.R. § 1.17(p). The undersigned hereby states that no item of information contained in the accompanying Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the accompanying Information Disclosure Statement was known to

Appl. No. 10/649,450

Docket No. ALLEG-039PUS

any individual having a duty of disclosure as set forth in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the accompanying Information Disclosure Statement.

SUBMISSION UNDER 37 C.F.R. § 1.97(d)

INCLUDING STATEMENTS UNDER 37 C.F.R. §§ 1.704(d) AND 1.97(e)(1)

[] (8) Pursuant to 37 C.F.R. § 1.97(d), the enclosed Information Disclosure Statement is being filed on or before payment of the issue fee and is accompanied by statements under 37 C.F.R. §§ 1.704(d) and 1.97(e)(1) and the fee required under 37 C.F.R. § 1.17(p). The undersigned hereby states that each item of information contained in the attached Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application mailed not more than three months prior to the filing of the accompanying Information Disclosure Statement and was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the accompanying Information Disclosure Statement.

The filing of this Information Disclosure Statement is not a representation by the undersigned as to personal knowledge of the contents of every word or phrase of the material enclosed or that reliance on other suitably trained professionals has not been made.

If a search report of a searching agency is enclosed identifying the nature of the relevance of each document, such a designation is deemed to satisfy Rule 98(a) (3) even if in a foreign language, since the few terms of relevance therein are deemed of universal cognizance. However, Applicant(s) does not necessarily adopt the position reflected by that report.

Appl. No. 10/649,450

Docket No. ALLEG-039PUS

The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 500845.

Respectfully submitted,

Dated:

May 15, 2006

DALY, CROWLEY, MOFFORD & DURKEE, LLP

By:

Kermit Robinson

Kermit Robinson
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28031.doc

PTO/SB/08A (02-03)

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1448/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

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| | | | | | |
|-------|---|----|---|------------------------|--------------|
| Sheet | 1 | of | 2 | Attorney Docket Number | ALLEG-039PUS |
|-------|---|----|---|------------------------|--------------|

U. S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

| | | | |
|-----------------------|--|--------------------|--|
| Examiner Signature | | Date Considered | |
|-----------------------|--|--------------------|--|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kind's Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Translation is attached.

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PTO/SB/D8B (02-03)

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

| | | | | | |
|--|---|----|---|------------------------|-----------------|
| Substitute for form 1449/PTD INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i> | | | | Complete if known | |
| | | | | Application Number | 10/649,450 |
| | | | | Filing Date | August 26, 2003 |
| | | | | First Named Inventor | Michael Doogue |
| | | | | Art Unit | 2831 |
| | | | | Examiner Name | Hung V. Ngo |
| | | | | Attorney Docket Number | ALLEG-039PUS |
| Sheet | 2 | of | 2 | | |

OTHER PRIOR ART—NON PATENT LITERATURE DOCUMENTS

[illegible]

| | | | |
|--------------------|--|-----------------|--|
| Examiner Signature | | Date Considered | |
|--------------------|--|-----------------|--|

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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